

| | | |
|-----|---|---------------|
| 1 | 51 | 100 |
| N24 | -y | e |
| N27 | -y | e |
| N26 | -y | q |
| N15 | -y | q |
| N17 | -y | r |
| N23 | -y | q |
| N29 | -y | hr |
| N13 | i | e |
| N22 | ty | r-q-e-n |
| T39 | a | kk |
| T44 | a | kk |
| T43 | a | kk |
| T37 | e | kk |
| T40 | t-a | f |
| T35 | a | i |
| T4 | a | kk |
| T3 | a | kk |
| T38 | a | n-kk |
| T42 | a | kk-n |
| Con | menqomiv wqydrirr wslmkm vskar-hfy rhvssphk vssewqipg dqrlettwn gh-gezoh lgqvstbar krvstqmp | |
| 101 | 151 | 194 |
| N24 | h | h |
| N27 | h | h |
| N26 | h | h |
| N15 | h | h |
| N17 | h | h |
| N23 | h | h |
| N29 | h | h |
| N13 | h | h |
| N22 | h | h |
| T39 | h | h |
| T44 | h | h |
| T43 | g | g |
| T37 | t | t |
| T40 | | |
| T35 | | |
| T4 | | |
| T3 | v | |
| T38 | t | |
| T42 | | |
| Con | lladqjly ydcsesai rkgqivs pceyqan kqslqylal aalitpkik pqlpsvrlt edrankqkt kghrcs-hm nh- | -te-aig- dt.. |

FIGURE 1

09/486625

WO 99/13896

PCT/US98/19478

29

18

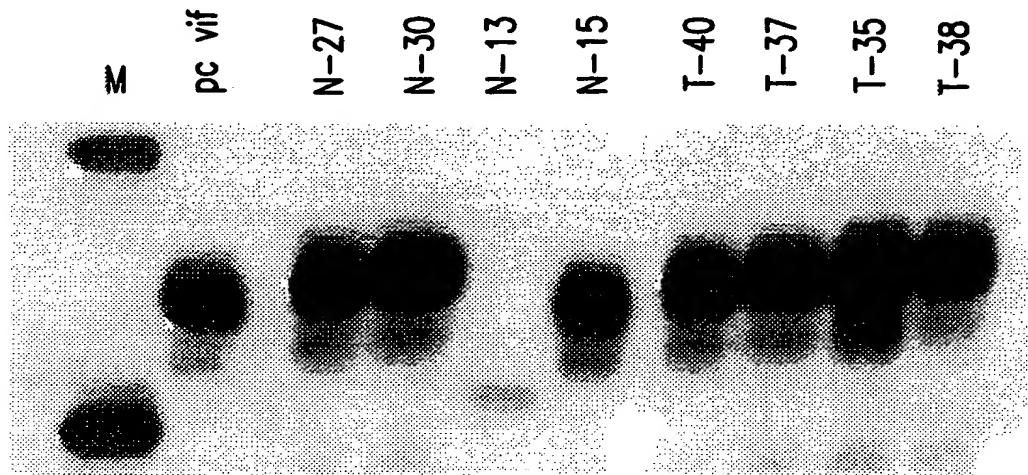


FIG.2

2/17

FIGURE 3B

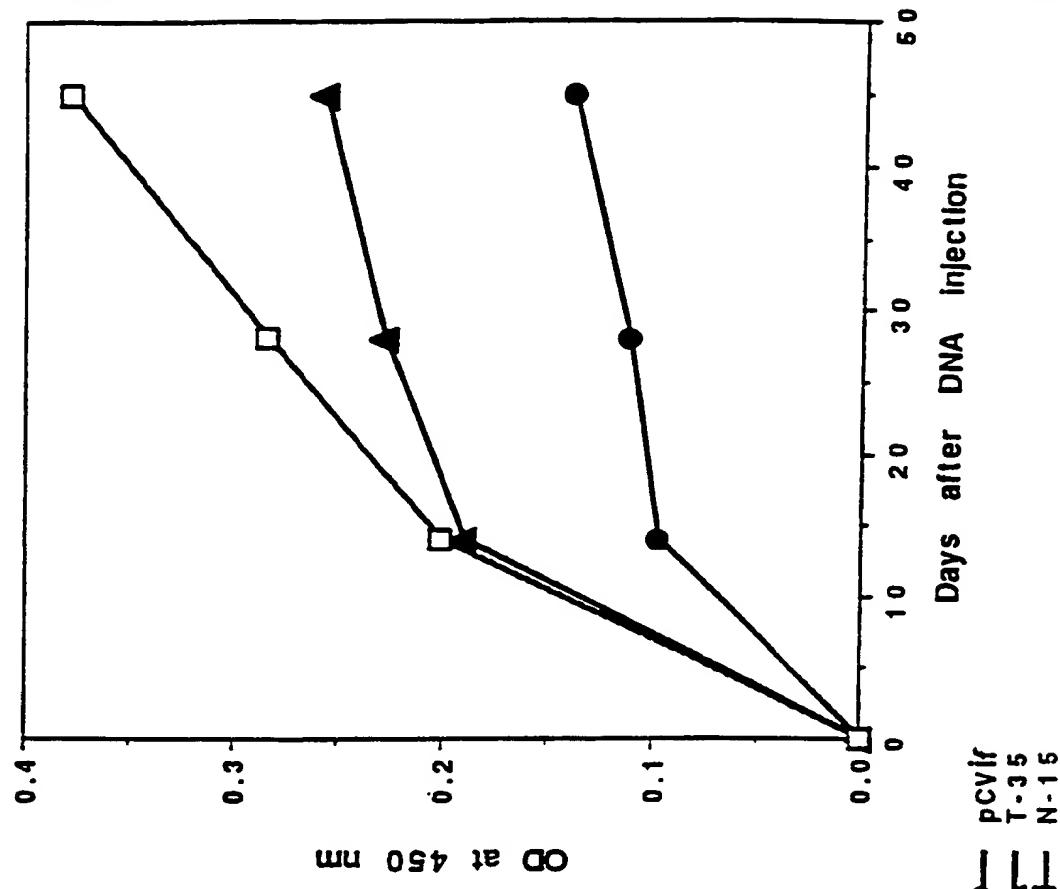
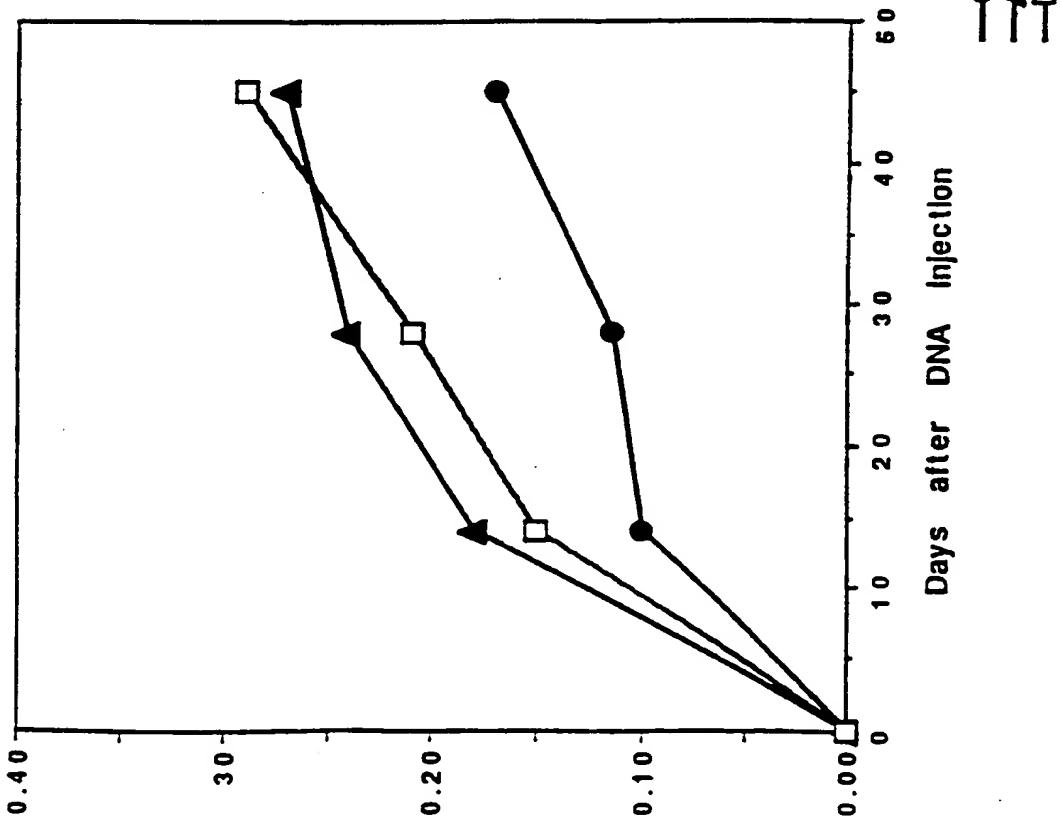


FIGURE 3A



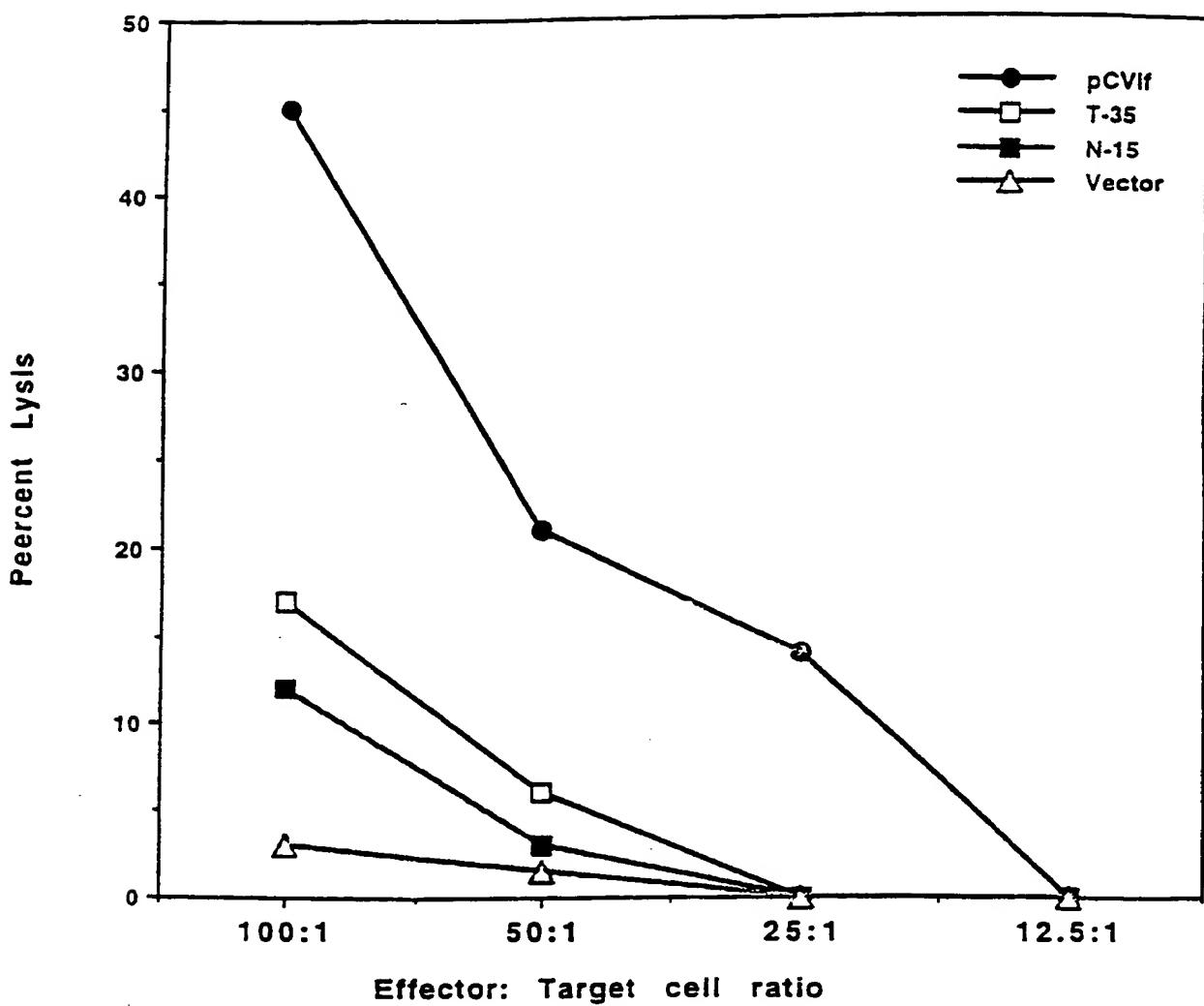


FIGURE 4

FIGURE 5B

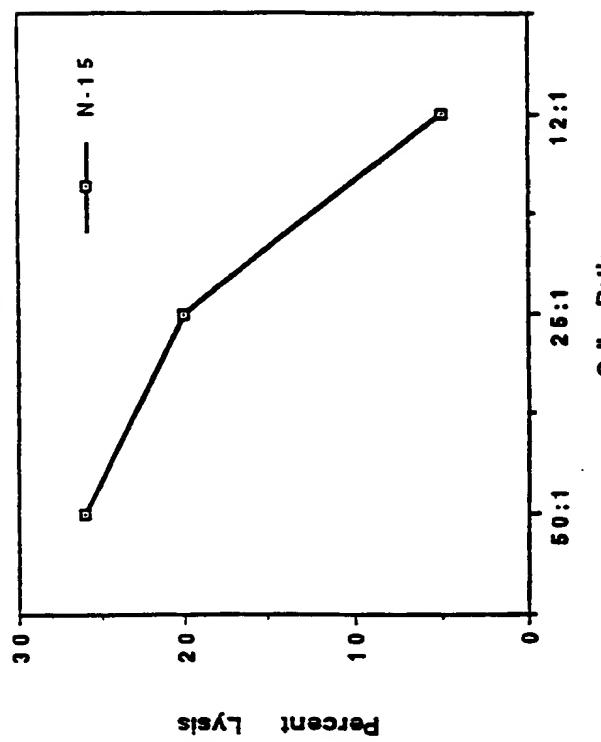


FIGURE 5D

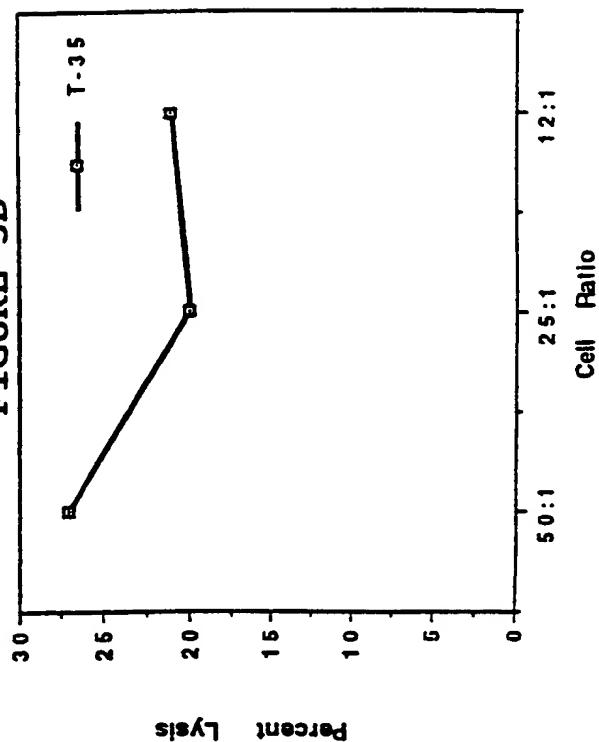


FIGURE 5A

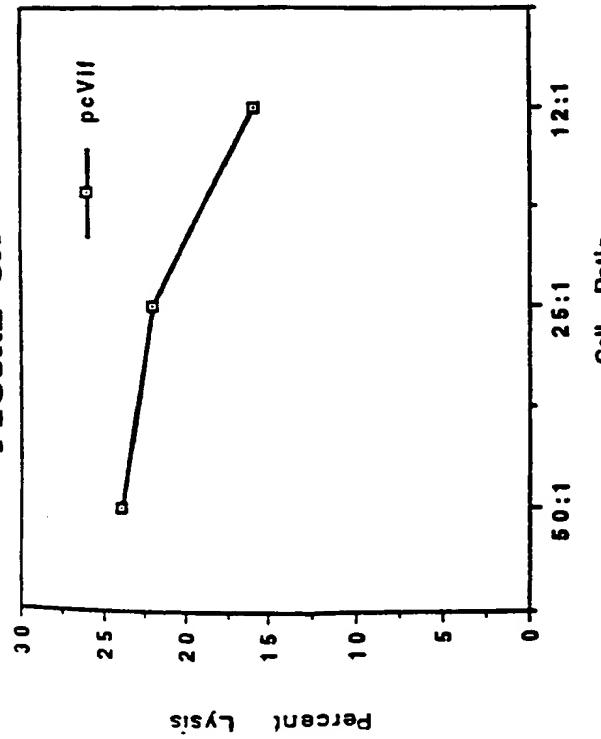
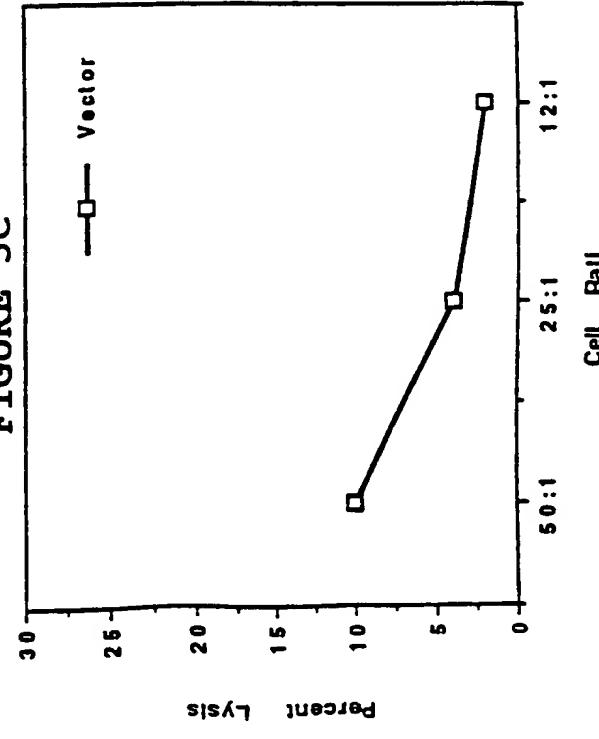


FIGURE 5C



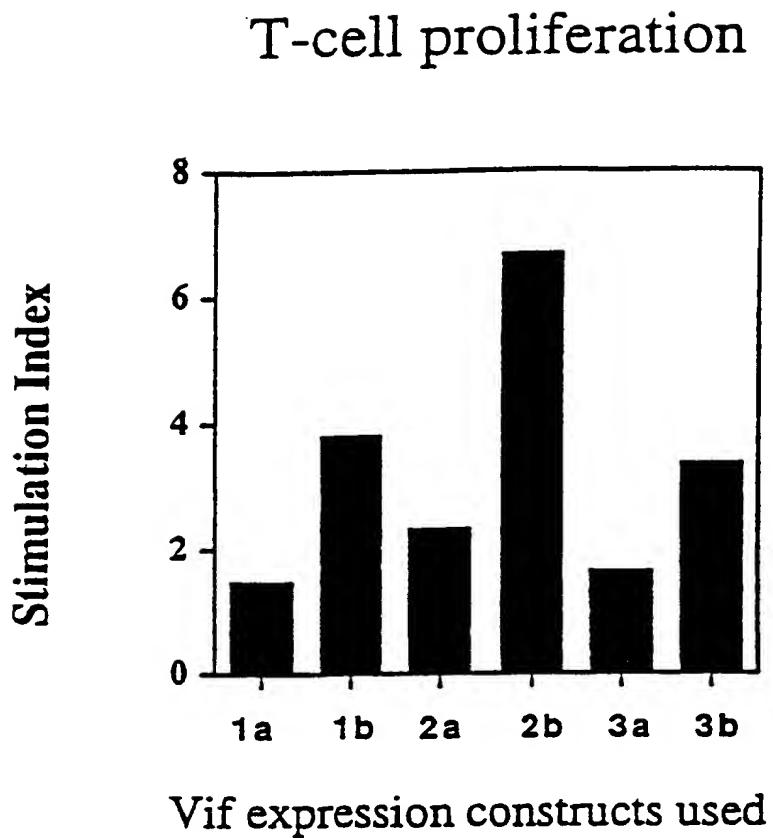


FIGURE 6

FIGURE 7A

1. **vif-N13.pep**

MENRWQVIIIV WQVDRMRIRT WNSLVKYHMY *SKKAREWFY *HHYQSPHPK
VSSEVHIPLE DARLEITSFW GLHTGERDWH LGQGVSIWR KRRYSTHVDP
DLADQLIHLY YFDCFSESAI RKAILGHRVS PRCEYRAGHS KVGSLOYLAI
AALITPKKIK PPLASVRKLT EDRWNPQKT KGHRGSHIMN GH*

2. **vif-N15.pep**

MENRWQVMIV WQVDRMRIRT WNSLVKYHMY RSKKAREWFY RHHYQSPHPR
VSSEVHIPLE DARLEITTYW GLHTGERDWH LGQGVSIWR KRRYSTQVDP
DLADQLIHLY YFDCFSESAI RKAILGHRVS PRCEYRAGHS KVGSLOYLAI
AALITPKKIK PPLPSVRKLT EDRWNPQKT KGHRGSHIMN GH*

3. **vif-N17.pep**

MENRWQVMIV WQVDRMRIRT WNSLVKYHMY RSKKAREWFY RHHYQSPHPK
VSSEVHIPLE DARLEITTYW GLHTGERDWH LGQGVSIWR KRRYSTQVDP
DLADQLIHLY YFDCFSESAI RKAILGHRVS PRCEYRAGHS KVGSLOYLAI
AALITPKKIK PPLPSVRKLT EDRWNPQKT KGHRGSHIMN GH*

FIGURE 7B

4. **vif-N22.pep**

MENRWQVMIV WQVDRMRIRT WNSLVTYHMY RSOKAREWFN RHHYHSPHPK
VSSEVHIPLE DARLAIPFW GLHTIGERDWH LGQGVSIERW RRRYSTQVDP
DLADQLIHLHY YFDCFSESAI RKAILGHRVS PRCEYRAGHS KVGSLQYLAI
AALITPKKIK PPLPSVRKLT EDRANKPQKT KGHRGSHIMN GH*

5. **vif-N24.Pep**

MENRWQVMIV WQVDRMRIRT WNSLVKYHMY RSKKAREWFY RHHYQSPHPK
VSSEVHIPLE DARLVITTYW GLHTIGERDWH LGQGVSIERW RRRYSTHVDP
DLADQLIHLHY YFDCFSESAI RKAILGHRVS PRCEYRAGHS KVGSLQYLAI
AALITPKKIK PPLASVRKLT EDRANKPQKT KGHRGSHIMN GH*

6. **vif-N26.pep**

MENRWQVMIV WQVDRMRIRT WNSLVKYHMY RSKKAREWFY RHHYQSPHPK
VSSEVHIPLE DARLVITTYW GLHTIGERDWH LGQGVSIERW RRRYSTQVDP
DLADHLIHLHY YFDCFSESAI RKAILGHRVS PRCEYRAGHS KVGSLQYLAI
AALITPKKIK PPLASVRKLT EDRANKPQKT KGHRGSHIMN GH*

7. **vif-N27.pep**

MENRWQVMIV WQVDRMRIRT WNSLVKYHMY RSKKAREWFY RHHYQSPHPK
VSSEVHIPLE DARLVITTFW GLHTIGERDWH LGQGVSIERW RRRYSTHVDP
DLADQLIHLHY YFDCFSESAI RKAILGHRVS PRCEYRAGHS KVGSLQYLAI

FIGURE 7C

AALITPKKIK PPLPSVRKLT EDWANKPQKT KGHRGSHIMN GH*

8. Vif-N29.pep

MENRWQVMIV WQVDRMRIRT WNSLVKYHMY RSKKAREWFN RHHYHRPHPK
VSSEVHIPLE DARLETTTFW GLHTGERIWH LGQGVSIERW KRRYSTQVDP
DLADQLIHLHY YFDCFSESAI RKAILGHRVS PRCEYRAGHS KVGSLOYLAI
AALITPKKIK PPLPSVRKLT EDWANKPQKT KGHRGSHIMN GH*

9. Vif-N30.

MENRWQVMIV WQVDRMRIRT WNSLVKYHMY RSQKEREWFN RHHYHSPHPE
QSSTAHILPLV DGRLEKIAW SLDITGEGVWH RGHRVSIEWR KRRYSTQVDP
DLVDQLIHLHY YFDCFSESAI RKAILGHRVS PRCEYRAGHS KVGSLOYLAI
AALITPKKIK PPLPSVRKLT EDWANKPQKT KGHRGSHIMN GH*

Vif-T3.pep

MENRWQVMIV WQVDRMRIRT WNSLVKHHMY VSKKAKKWFY RHHYESPHPK
VSSTAHILPLG DGRLEKIAW SLQAGDGVWH RGHPVSIEWR KRRYSTQVDP
DLVDQLIHLHY YFDCFSESAI RKAILGYRVS PRCEYQAGHN KVGSLOYLAL
AALITPKKIK PPLPSVRKLT EDWANKPQKT KGHRGSHIMN GH*

Vif-T35.pep

FIGURE 7D

MENRWQVMIV WQVDRMRIRA WNSLVKHHY FSKKAKKWFY RHHYESPHN
VSSEVHPLG DARLVITPYW GLHAGERDWY LAQGVSIWR KRRYSTQVDP
DLADQLIHL YFDCFSESAI RKAILGYRVS PRCEYQAGHN KVGSLQYLAL
AALITPKKIK PPLPSVRKLT EDRWNKPQKT KGHRGSHIMN GH*

vif-T37.pep

MENRWEVIV WEVDRMRIRA WNSLVKHHY VSKKAKKWFY RHHYESPHPK
VSSEVHPLG DARLVITTYW GLHAGERDWH LGQGVSIWR KRRYSTQVDP
DLADQLIHL YFDCFSESAI RKAILGYRVS PRCEYQAGHN KVGSLQYLAL
AALITPKKIK PPLPSVRKLT EDRWNKPQKT KGHRGSHIMN GH*

vif-T38.pep

MENRWQVMIV WQVDRMRIRA WNSLVKHHY VSKNAKKWFY RHHYDSPHPV
QSSTIAHPLG DGRLOKIAFW SLGAGERDWH LGQGVSIWR KRRYSTQVDP
DLADQLIHL YFDCFSESAI RKAILGYRVS PRCEYQAGHN KVGSLQYLAL
AALITPKKIK PPLPSVRKLT EDRWNKPQKT KGHRGSHIMN GH*

vif-T39.pep

MENRWQVMIV WQVDRMRIRA WNSLVKHHY VSKKAKKWFY RHHYDSPHPK
VSSEVHPLG DARLEITTYW GLHAGERDWH LGQGVSIWR KRRYSTHVDP

FIGURE 7E

DLADQLIHL YFDCFSESAI RKAILGYRVS PRCEYQAGHN KVGSLOYLAL
AALITPKKIK PPLPSVRKLT EDRWNKPOKT KGHRGSHIMN GH*

Vif-T4.pep

MENRWQMIV WQVDRMRIRA WNSLVKHHMY VSKKARIWFS RHHYGSHPK
VCSEVHIPLG DARLVITTYW SLHAGE*DWH VGQRVSIEWR KRRYSTQVDP
DLADQLIHL YFDCFSESAI RKAILGYRVS PRCEYQAGHN KVGSLOYLAL
AALITPKKIK PPLPSVRKLT EDRWNKPOKT KGHRGSHIMN GH*

Vif-T40.pep

MENRWQMIV WQVDRMTIRA WNSLVKHHMY VSKKAKKWFY RHHYESHPK
VSSEVHIPLG DARLVITTYW GLHAGERDWH LGQRVSIEWR KRRYSTQVDP
DLADQLIHL YFDCFSESAI RKAILGYRVS PRCEYQAGHN KVGSLOYLAL
AALITPKKIK PPLPSVRKLT EDRWNKPOKT KGHRGSHIMN GH*

Vif-T42.pep

MENRWQMIV WQVDRMRIRA WNSLVKHHMY VSKKAKKWFN RHHYDRPHPK
VSSEVHIPLG DARLEITTFW GLHAGERDWH LGQRVSIEWR KRRYSTQVDP
DLADQLIHL YFDCFSESAI RKAILGYRVS PRCEYQAGHN KVGSLOYLAL
AALITPKKIK PPLPSVRKLT EDRWNKPOKT KGIEGAIQ*

FIGURE 7F

Vif-T43.pep

MENRWQVMIV WQVDRMRIRA WNSLVKHHMF VSKKAKKWFY RHHYESPHPK
VSSEVHPLG DARLEITTFW GLHAGERDWH LGQGVSIWR KRRYSTQVDP
DLADQLIHLY YFGCFSESAI RKAILGYRVS PRCEYQAGHN KVGSLQYLGL
AALITPKKIK PPLPSVRKLT EDRWNPQKT KGHRGSHMN GH*

Vif-T44.pep

MENRWQVMIV WQVDRMRIRA WNSLVKHHMY VSKKAKKWFY RHHYESPHPQ
VSSEVHPLG DARLEITTYW GLHAGERDWH LGQGVSIWR KRRYSTQVDP
DLADQLIHLY YFDGFSESAI RKAILGYRVS PRCEYQAGHN KVGSLQYLAL
AALITPKKIK PPLPSVRKLT EDRWNPQKT KGHRGSHMN GH*

FIGURE 8A

N13 (SEQ ID NO:27)

ATGGAAAACAGATGGCAGGTGATTATTGTGTGGCAGGTAGACAGGGATGAGGATTAGAAC
 TGGAACAGTTAGTAAAATACCATATGTATTGATCAAAGAAAGCTAGGGATGGTTTAT
 TGACATCACTATCAAAGTCCTCATCCAAAAGTAAGTTAGAAGTACACATCCACTAGAG
 GATGCTAGATTGAAATAACATCATTGGGGTCTGCATACAGGAGAAAGAGACTGGCAT
 TTGGGTAGGGAGTCTCCATAGAATGGAGGAAAGGAGATATAGCACACACGTCGACCC
 GATCTAGCAGACCAACTAATTCTGTATTATTGATTGTTCTAGGTGTGAATATCGAGCAGGACATAGC
 AGAAAAGCCATATTAGGACACAGAGTTAGCCTAGGTGTGAATATCGAGCAGGACATAGC
 AAGGTAGGATCACTACAGTACTTGGCAATAGCAGCATTAAATAACACCAAAAAAGATAAAG
 CCACCTTGGCGAGTGTAGGAAACTGACAGAGGATAGATGGAACAAGCCCCAGAAGACC
 AAGGGCCACAGAGGGAGCCATACAATGAATGGACACTAG

N15 (SEQ ID NO:28)

ATGGAAAACAGATGGCAGGTGATGATTGTGTGGCAGGTAGACAGGGATGAGGATTAGAAC
 TGGAACAGTTAGTAAAATACCATATGTATAGATCAAAGAAAGCTAGGGATGGTTTAT
 AGACATCACTATCAAAGTCCTCATCCAAAAGTAAGTTAGAAGTACACATCCACTAGAG
 GATGCTAGATTGAAATAACACATATTGGGGTCTGCATACAGGAGAAAGAGACTGGCAT
 TTGGGTAGGGAGTCTCCATAGAATGGAGGAAAGGAGATATAGCACACACGTCGACCC
 GATCTAGCAGACCAACTAATTCTGTATTATTGATTGTTCTAGGTGTGAATCTGCTATA
 AGAAAAGCCATATTAGGACACAGAGTTAGCCTAGGTGTGAATATCGAGCAGGACATAGC
 AAGGTAGGATCACTACAGTACTTGGCAATAGCAGCATTAAATAACACCAAAAAAGATAAAG
 CCACCTTGGCGAGTGTAGGAAACTGACAGAGGATAGATGGAACAAGCCCCAGAAGACC
 AAGGGCCACAGAGGGAGCCATACAATGAATGGACACTAG

N17 (SEQ ID NO:29)

ATGGAAAACAGATGGCAGGTGATGATTGTGTGGCAGGTAGACAGGGATGAGGATTAGAAC
 TGGAACAGTTAGTAAAATACCATATGTATAGATCAAAGAAAGCTAGGGATGGTTTAT
 AGACATCACTATCAAAGTCCTCATCCAAAAGTAAGTTAGAAGTACACATCCACTAGAG
 GATGCTAGATTGAAATAACACATATTGGGGTCTGCATACAGGAGAAAGAGACTGGCAT
 TTGGGTAGGGAGTCTCCATAGAATGGAGGAAAGGAGATATAGCACACACGTCGACCC
 GATCTAGCAGACCAACTAATTCTGTATTATTGATTGTTCTAGGTGTGAATCTGCTATA
 AGAAAAGCCATATTAGGACACAGAGTTAGCCTAGGTGTGAATATCGAGCAGGACATAGC
 AAGGTAGGATCACTACAGTACTTGGCAATAGCAGCATTAAATAACACCAAAAAAGATAAAG
 CCACCTTGGCGAGTGTAGGAAACTGACAGAGGATAGATGGAACAAGCCCCAGAAGACC
 AAGGGCCACAGAGGGAGCCATACAATGAATGGACACTAG

N22 (SEQ ID NO:30)

ATGGAAAACAGATGGCAGGTGATGATTGTGTGGCAGGTAGACAGGGATGAGGATTAGAAC
 TGGAACAGTTAGTAACATACCATATGTATAGATCACAGAAAGCTAGGGATGGTTAAT
 AGACATCACTATCACAGTCCTCATCCAAAAGTAAGTTAGAAGTCCACATCCACTAGAG
 GATGCTAGATTGGCAATACACATTTGGGGTCTGCATACAGGAGAAAGAGACTGGCAT
 TTGGGTAGGGAGTCTCCATAGAATGGAGGAAAGGAGATATAGCACACACGTCGACCC
 GATCTAGCAGACCAACTAATTCTGTATTATTGATTGTTCTAGGTGTGAATCTGCTATA
 AGAAAAGCCATATTAGGACACAGAGTTAGCCTAGGTGTGAATATCGAGCAGGACATAGC
 AAGGTAGGATCACTACAGTACTTGGCAATAGCAGCATTAAATAACACCAAAAAAGATAAAG
 CCACCTTGGCGAGTGTAGGAAACTGACAGAGGATAGATGGAACAAGCCCCAGAAGACC
 AAGGGCCACAGAGGGAGCCATACAATGAATGGACACTAG

FIGURE 8B

N23 (SEQ ID NO:31)

ATGGAAAACAGATGGCAGGTGATGATTGTGTGGCAGGTAGACAGGGATGAGGATTAGAAC
 TGGAACAGTTAGTAAAATACCATATGTATAGATCAAAGAAAGCTAGGGAATGGTTTAT
 AGACATCACTATCAAAGTCCTCATCCAAAAGTAAGTTCAGAAGTACACATCCACTAGAG
 GATGCTAGATTGGAAATAACAACATATTGGGGTCTGCATACAGGAGAAAGAGACTGGCAT
 TTGGGTAGGGAGTCTCCATAGAATGGAGGAAAGGGAGATATAGCACACACGTCACCT
 GATCTCGCAGACACCTAATTCTGTGTTATTTGATTGTCTTCAGAATCTGCTATA
 AGAAAAGCCATATTAGGACACAGAGTTAGTCCTAGGTGTGAATATCGAGCAGGACATAGC
 AAGGTAGGATCACTACAGTACTTGGCAATAGCAGCATTAAATAACACCAAAAAAGATAAAG
 CCACCTTGGCGAGTGTAGGAAACTGACAGAGGATAGATGGAACAAGCCCCAGAAGACC
 AAGGGCCACAGAGGGAGCCATAATGAATGGACACTAG

N24 (SEQ ID NO:32)

ATGGAAAACAGATGGCAGGTGATGATTGTGTGGCAGGTAGACAGGGATGAGGATTAGAAC
 TGGAACAGTTAGTAAAATACCATATGTATAGATCAAAGAAAGCTAGGGAATGGTTTAT
 AGACATCACTATCAAAGTCCTCATCCAAAAGTAAGTTCAGAAGTACACATCCACTAGAG
 GATGCTAGATTGGTAATAACAACATATTGGGGTCTGCATACAGGAGAAAGAGACTGGCAT
 TTGGGTAGGGAGTCTCCATAGAATGGAGGAAAGGGAGATATAGCACACACGTCACCT
 GATCTAGCAGACCAACTAATTCTGTATTATTTGATTGTCTTCAGAATCTGCTATA
 AGAAAAGCCATATTAGGACACAGAGTTAGTCCTAGGTGTGAATATCGAGCAGGACATAGC
 AAGGTAGGATCACTACAGTACTTGGCAATAGCAGCATTAAATAACACCAAAAAAGATAAAG
 CCACCTTGGCGAGTGTAGGAAACTGACAGAGGATAGATGGAACAAGCCCCAGAAGACC
 AAGGGCCACAGAGGGAGCCATAATGAATGGACACTAG

N26 (SEQ ID NO:33)

ATGGAAAACAGATGGCAGGTGATGATTGTGTGGCAGGTAGACAGGGATGAGGATTAGAAC
 TGGAACAGTTAGTAAAATACCATATGTATAGATCAAAGAAAGCTAGGGAATGGTTTAT
 AGACATCACTATCAAAGTCCTCATCCAAAAGTAAGTTCAGAAGTACACATCCACTAGAG
 GATGCTAGATTGGTAATAACAACATATTGGGGTCTGCATACAGGAGAAAGAGACTGGCAT
 TTGGGTAGGGAGTCTCCATAGAATGGAGGAAAGGGAGATATAGCACACACGTCACCT
 GATCTAGCAGACCAACTAATTCTGTATTATTTGATTGTCTTCAGAATCTGCTATA
 AGAAAAGCCATATTAGGACACAGAGTTAGTCCTAGGTGTGAATATCGAGCAGGACATAGC
 AAGGTAGGATCACTACAGTACTTGGCAATAGCAGCATTAAATAACACCAAAAAAGATAAAG
 CCACCTTGGCGAGTGTAGGAAACTGACAGAGGATAGATGGAACAAGCCCCAGAAGACC
 AAGGGCCACAGAGGGAGCCATAATGAATGGACACTAG

N27 (SEQ ID NO:34)

ATGGAAAACAGATGGCAGGTGATGATTGTGTGGCAGGTAGACAGGGATGAGGATTAGAAC
 TGGAACAGTTAGTAAAATACCATATGTATAGATCAAAGAAAGCTAGGGAATGGTTTAT
 AGACATCACTATCAAAGTCCTCATCCAAAAGTAAGTTCAGAAGTACACATCCACTAGAG
 GATGCTAGATTGGTAATAACAACATTTGGGGTCTGCATACAGGAGAAAGAGACTGGCAT
 TTGGGTAGGGAGTCTCCATAGAATGGAGGAAAGGGAGATATAGCACACACGTCACCT
 GATCTAGCAGACCAACTAATTCTGTATTATTTGATTGTCTTCAGAATCTGCTATA
 AGAAAAGCCATATTAGGACACAGAGTTAGTCCTAGGTGTGAATATCGAGCAGGACATAGC
 AAGGTAGGATCACTACAGTACTTGGCAATAGCAGCATTAAATAACACCAAAAAAGATAAAG
 CCACCTTGGCGAGTGTAGGAAACTGACAGAGGATAGATGGAACAAGCCCCAGAAGACC
 AAGGGTCACAGAGGGAGCCATAATGAATGGACACTAG

FIGURE 8C

N29 (SEQ ID NO:35)

ATGGAAAACAGATGGCAGGTGATGATTGTGGCAGGTAGACAGGGATGAGGATTAGAACATGGAACAGTTAGTAAAATACCATATGTATAGATCAAAGAAAGCTAGGAAATGGTTAATAGACATCACTATCACCCTCCTCATCCAAAAGTAAGTTAGTCAGAAGTCCACATCCCACACTAGAGGATGCTAGATTGGAAATAACACATTGGGGCTGCATACAGGAGAAAGAGACTGGCATTTGGGTCAAGGGAGTCTCCATAGAATGGAGGAAAAGGAGATATAGCACACAAAGTAGACCTGATCTAGCAGACCAACTAATTCTATGTATTATTTGATTGTTTCAGAATCTGCTATAAGAAAAGCCATATTAGGACACAGAGTTAGTCCTAGGTGTGAATATCGAGCAGGACATAGCAAGGTAGGATCACTACAGTACTTGGCAATAGCAGCATTAAATAACACCAAAAAAGATAAAGCCACCTTGCGAGTGTCAAGGAAACTGACAGAGGATAGATGGAACAAGCCCCAGAACAGACCAGGGCCACAGAGGGAGCCATACAATGAATGGACACTAG

N30 (SEQ ID NO:36)

ATGGAAAACAGATGGCAGGTGATGATTGTGGCAGGTAGACAGGGATGAGGATTAGAACATGGAACAGTTAGTAAAATACCATATGTATTGATCAAAGAAAAGAAAGGGAAATGGTTTATTTATAGACATCACTATCACAGCCCTCATCCAGAACAAAGTTCAACAGCCCACATCCCCTAGTGGATGGTAGATTGGAAAAAAATAGCAGTTGGAGTCTGGATACAGGAGATGGCGTCTGGCACAGGGGGCATCGAGTCTCCATAGAATGGAGGAAAAGGAGATATAGCACACAAAGTAGACCCCTGATCTAGTAGACCAACTAATTCTATGTATTATTTGATTGTTTCAGAATCTGCTATAAGAAAAGCCATATTAGGACACAGAGTTAGTCCTAGGTGTGAATACCAAGCAGGACATAATAGCAAGGTAGGATCACTACAGTACTTGGCAATAGCAGCATTAAATAACACCAAAAAAGATAAAGCCACCTTGCGAGTGTCAAGGAAACTGACAGAGGATAGATGGAACAAGCCCCAGAACACCAAGGGCCACAGAGGGAGCCATACAATGAATGGACACTAG

T3 (SEQ ID NO:37)

ATGGAAAACAGATGGCAGGTGATGATTGTGGCAAGTAGACAGGGATGAGGATTAGAACATGGAACAGTTAGTAAAACACCATATGTATGTTCAAAGAAAAGCTAAGAAAATGGTTTATAGACATCACTATGAAAGCCCTCATCCAAAAGTAAGTTCAACAGCCCACATCCCCTAGGGGATGGTAGATTGGAGAAAACAGCAGTTGGAGTCTGCAGGCAGGAGATGGAGTCTGGCACAGGGGGCATCCAGTCTCCATAGAATGGAGGAAAAGGAGATATAGCACACAAAGTAGACCCCTGATTGGTAGACCAACTAATTCTATGTATTATTTGATTGTTTCAGAATCTGCTATAAGAAAAGCCATATTAGGATATAGAGTTAGTCCTAGGTGTGAATACCAAGCAGGACATAATAAGTAGGATCTCTACAGTACTTGGCACTAGCAGCATTAAATAACACCAAAAGAAGATAAAGCCACCTTGCGCTAGTGTAGGAAACTGACAGAGGATAGATGGAACAAGCCCCAGAACAGGGCCACAGAGGGAGCCATACAATGAATGGACACTAG

T4 (SEQ ID NO:38)

ATGGAAAACAGATGGCAGGTGATGATTGTGGCAAGTAGACAGGGATGAGGATTAGAGCATGGAACAGTTAGTAAAACACCATATGTATGTTCAAAGAAAAGCTAGGACATGGTTTCTAGACATCACTATGGAAGCCCTCATCCAAAAGTAAGTTAGTCAGAAGTACACATCCCACACTAGGGGATGCTAGATTGGTAGATAACACATAATTGGAGTCTGCATGCAGGAGAATGAGACTGGCATGTGGGTCAAGAGAGTCTCCATAGAATGGAGGAAAAGGAGATATAGCACACAAAGTAGACCCCTGACTTGGCAGACCAACTAATTCTATGTATTATTTGATTGTTTCAGAATCTGCTATAAGAAAAGCCATATTAGGATATAGAGTTAGTCCTAGGTGTGAATACCAAGCAGGACATAATAAGTAGGATCTCTACAGTACTTGGCACTAGCAGCATTAAATAACACCAAAAGAAGATAAAGCCACCTTGCGCTAGTGTAGGAAACTGACAGAGGATAGATGGAACAAGCCCCAGAACAGGGCCACAGAGGGAGCCATACAATGAATGGACACTAG

FIGURE 8D

T35 (SEQ ID NO: 39)

ATGGAAAACAGATGGCAGGTGATGATTGTGGCAAGTAGACAGGGATGAGGATTAGAGCA
 TGGAAACAGTTAGTAAACACCATATTATTTCAAAGAAAGCTAAGAAATGGTTTAT
 AGACATCACTATGAAAGCCCTCATCCAAACGTAAGTTAGAAGTACACATCCCACTAGGG
 GATGCTAGATTGGTGACAACACCATATTGGGGTCTGCATGGAGGAGAAAGAGACTGGTAT
 CTGGCTCAGGGAGTCTCCATAGAATGGAGGAAAAGGAGATATAGCACACAGTAGACCC
 GACCTGGCAGACCAACTAATTCTGTATTATTTGATTGTTTCAGAATCTGCTATA
 AGAAAAGCCATATTAGGATATAGAGTTAGTCTAGGTGTGAATACCAAGCAGGACATAAT
 AAGGTAGGATCTCTACAGTACTTGGCACTAGCAGCATTAAACACCAAAGAAGATAAAG
 CCACCTTGCCTAGTGTGAGGAAACTGACAGAGGATAGATGGAACAAGCCCCAGAAGACC
 AAGGGCCACAGAGGGAGCCATACAATGAATGGACACTAG

T37 (SEQ ID NO: 40)

ATGGAAAACAGATGGGAGGTGATGATTGTGGGAAGTAGACAGGGATGAGGATTAGAGCA
 TGGAAACAGTTAGTAAACACCATATGTATGTTCAAAGAAAGCTAAGAAATGGTTTAT
 AGACATCACTATGAAAGCCCTCATCCAAAGTAAGTTAGAAGTACACATCCCACTAGGG
 GATGCTAGATTGGTGATAACACATATTGGGGTCTGCATGCAGGAGAAAGAGACTGGCAT
 TTGGGTCAAGGGAGTCTCCATAGAATGGAGGAAAAGGAGATATAGCACACAGTAGACCC
 GACCTGGCAGACCAACTAATTCTGTATTATTTGATTGTTTCAGAATCTGCTATA
 AGAAAAGCCATATTAGGATATAGAGTTAGTCTAGGTGTGAATACCAAGCAGGACATAAT
 AAGGTAGGATCTCTACAGTACTTGGCACTAGCAGCATTAAACACCAAAGAAGATAAAG
 CCACCTTGCCTAGTGTGAGGAAACTGACAGAGGATAGATGGAACAAGCCCCAGAAGACC
 AAGGGCCACAGAGGGAGCCATACAATGAATGGACACTAG

T38 (SEQ ID NO: 41)

ATGGAAAACAGATGGCAGGTGATGATTGTGGCAAGTAGACAGGGATGAGGATTAGAGCA
 TGGAAACAGTTAGTAAACACCATATGTATGTTCAAAGAAAGCTAAGAAATGGTTTAT
 CGACATCACTATGACAGCCCTCATCCAGTCAAAGTCAACAGCCCACATCCCGCTAGGG
 GATGGTAGATTGCAAGAAAATAGCATTGGAGTCTGGATGCAGGAGAAAGAGACTGGCAT
 TTGGGTCAAGGGAGTCTCCATAGAATGGAGGAAAAGGAGATATAGCACACAGTAGACCC
 GACCTGGCAGACCAACTAATTCTGTATTATTTGATTGTTTCAGAATCTGCTATA
 AGAAAAGCCATATTAGGATATAGAGTTAGTCTAGGTGTGAATACCAAGCAGGACATAAT
 AAGGTAGGATCTCTACAGTACTTGGCACTAGCAGCATTAAACACCAAAGAAGATAAAG
 CCACCTTGCCTAGTGTGAGGAAACTGACAGAGGATAGATGGAACAAGCCCCAGAAGACC
 AAGGGCCACAGAGGGAGGCATACAATGAATGGACACTAG

T39 (SEQ ID NO: 42)

ATGGAAAACAGATGGCAGGTGATGATTGTGGCAAGTAGACAGGGATGAGGATTAGAGCA
 TGGAAACAGTTAGTAAACACCATATGTATGTTCAAAGAAAGCTAAGAAATGGTTTAT
 AGACATCACTATGACAGCCCTCATCCAAAGTAAGTTAGAAGTACACATCCCACTAGGG
 GATGCTAGATTGGAGATAACACATATTGGGGTCTGCATGCAGGAGAAAGAGACTGGCAT
 TTGGGTCAAGGGAGTCTCCATAGAATGGAGGAAAAGGAGATATAGCACACAGTAGACCC
 GACCTGGCAGACCAACTAATTCTGTATTATTTGATTGTTTCAGAATCTGCTATA
 AGAAAAGCCATATTAGGATATAGAGTTAGTCTAGGTGTGAATACCAAGCAGGACATAAT
 AAGGTAGGATCTCTACAGTACTTGGCACTAGCAGCATTAAACACCAAAGAAGATAAAG
 CCACCTTGCCTAGTGTGAGGAAACTGACAGAGGATAGATGGAACAAGCCCCAGAAGACC
 AAGGGCCACAGAGGGAGCCATACAATGAATGGACACTAG

FIGURE 8E

T40 (SEQ ID NO:43)

ATGGAAAACAGATGGCAGGTGATGATTGTGTGGCAAGTAGACAGGGATGACGATTAGAGCA
 TGGAACAGTTAGTAAAACACCATATGTATGTTCAAAGAAAGCTAAGAAATGGTTTAT
 AGACATCACTATGAAAGCCTCATCCAAAAGTAAGTTAGTCAGAAGTACACATCCCCTAGGG
 GATGCTAGATTGGTGTGATAACACATATTGGGGTCTGCATGCAGGAGAAAGAGACTGGCAT
 TTGGGTCAAGGAGTCTCCATAGAATGGAGGAAAGGAGATATAGCACACAAAGTAGACCCCT
 GACTTGGCAGACCAACTAATCTGTATTATTTGATTGTTTCAGAATCTGCTATA
 AGAAAAGCCATATTAGGATATAGAGTTAGTCCTAGGTGTGAATACCAAGCAGGACATAAT
 AAGGTAGGATCTCTACAGTACTTGGCACTAGCAGCATTAAATAACACCAAAAGAAGATAAAG
 CCACCTTGCCTAGTGTGAGGAAACTGACAGAGGATAGATGGAACAAGCCCCAGAAGACC
 AAGGCCACAGAGGGAGCCATACAATGAATGGACACTAG

T42 (SEQ ID NO:44)

ATGGAAAACAGATGGCAGGTGATGATTGTGTGGCAAGTAGACAGGGATGAGGATTAGAGCA
 TGGAACAGTTAGTAAAACACCATATGTATGTTCAAAGAAAGCTAAGAAATGGTTTAT
 AGACATCACTATGAAAGCCTCATCCAAAAGTAAGTTAGTCAGAAGTACACATCCCCTAGGG
 GATGCTAGATTGGAGATAACACATTTGGGGTCTGCATGCAGGAGAAAGAGACTGGCAT
 TTGGGTCAAGGAGTCTCCATAGAATGGAGGAAAGGAGATATAGCACACAAAGTAGACCCCT
 GACTTGGCAGACCAACTAATTCTGTATTATTTGTTGTTTCAGAATCTGCTATA
 AGAAAAGCCATATTAGGATATAGAGTTAGTCCTAGGTGTGAATACCAAGCAGGACATAAT
 AAGGTAGGATCTCTACAGTACTTGGCACTAGCAGCATTAAATAACACCAAAAGAAGATAAAG
 CCACCTTGCCTAGTGTGAGGAAACTGACAGAGGATAGATGGAACAAGCCCCAGAAGACC
 AAGGCCACAGAGGGAGCCATACAATGAATGGACACTAG

T43 (SEQ ID NO:45)

ATGGAAAACAGATGGCAGGTGATGATTGTGTGGCAAGTAGACAGGGATGAGGATTAGAGCA
 TGGAACAGTTAGTAAAACACCATATGTATGTTCAAAGAAAGCTAAGAAATGGTTTAT
 AGACATCACTATGAAAGCCTCATCCAAAAGTAAGTTAGTCAGAAGTACACATCCCCTAGGG
 GATGCTAGATTGGAGATAACACATTTGGGGTCTGCATGCAGGAGAAAGAGACTGGCAT
 TTGGGTCAAGGAGTCTCCATAGAATGGAGGAAAGGAGATATAGCACACAAAGTAGACCCCT
 GACTTGGCAGACCAACTAATTCTGTATTATTTGTTGTTTCAGAATCTGCTATA
 AGAAAAGCCATATTAGGATATAGAGTTAGTCCTAGGTGTGAATACCAAGCAGGACATAAT
 AAGGTAGGATCTCTACAGTACTTGGCACTAGCAGCATTAAATAACACCAAAAGAAGATAAAG
 CCACCTTGCCTAGTGTGAGGAAACTGACAGAGGATAGATGGAACAAGCCCCAGAAGACC
 AAGGCCACAGAGGGAGCCATACAATGAATGGACACTAG

T44 (SEQ ID NO:46)

ATGGAAAACAGATGGCAGGTGATGATTGTGTGGCAAGTAGACAGGGATGAGGATTAGAGCA
 TGGAACAGTTAGTAAAACACCATATGTATGTTCAAAGAAAGCTAAGAAATGGTTTAT
 AGACATCACTATGAAAGCCTCATCCAAAAGTAAGTTAGTCAGAAGTACACATCCCCTAGGG
 GATGCTAGATTGGAGATAACACATTTGGGGTCTGCATGCAGGAGAAAGAGACTGGCAT
 TTGGGTCAAGGAGTCTCCATAGAATGGAGGAAAGGAGATATAGCACACAAAGTAGACCCCT
 GACTTGGCAGACCAACTAATTCTGTATTATTTGTTGTTTCAGAATCTGCTATA
 AGAAAAGCCATATTAGGATATAGAGTTAGTCCTAGGTGTGAATACCAAGCAGGACATAAT
 AAGGTAGGATCTCTACAGTACTTGGCACTAGCAGCATTAAATAACACCAAAAGAAGATAAAG
 CCACCTTGCCTAGTGTGAGGAAACTGACAGAGGATAGATGGAACAAGCCCCAGAAGACC
 AAGGCCACAGAGGGAGCCATACAATGAATGGACACTAG